

Title (en)  
SEAT BELT RETRACTOR HAVING VEHICLE SENSOR

Title (de)  
SICHERHEITSGURTAUFROLLER MIT FAHRZEUGSENSOR

Title (fr)  
RÉTRACTEUR DE CEINTURE DE SÉCURITÉ COMPORTANT UN CAPTEUR DE VÉHICULE

Publication  
**EP 4023505 A4 20230927 (EN)**

Application  
**EP 20857353 A 20200827**

Priority  
• KR 20190105224 A 20190827  
• KR 2020011449 W 20200827

Abstract (en)  
[origin: EP4023505A1] Disclosed is a seat belt retractor having a vehicle sensor. The seat belt retractor includes: a fixed frame connected to a vehicle body; a spool mounted on the fixed frame so as to be rotatable about a shaft arranged in a predetermined direction, in which a seat belt is wound around the spool; a control disc connected to the shaft about which the spool rotates to rotate together with the spool, and having external teeth; a vehicle sensor unit for detecting a change in acceleration of a vehicle by a fluctuation of an inertial member to prevent the control disc from rotating; and an installation member coupled to a housing which is coupled to one sidewall of the fixed frame, wherein the vehicle sensor unit is directly and rotatably coupled to the installation member. Accordingly, the number of components required for installing the vehicle sensor unit is reduced, so that workability is improved during an assembly work, and a manufacturing cost is reduced.

IPC 8 full level  
**B60R 22/40** (2006.01); **B60R 22/34** (2006.01); **B60R 22/415** (2006.01)

CPC (source: CN EP KR US)  
**B60R 22/34** (2013.01 - CN US); **B60R 22/40** (2013.01 - CN EP KR US); **B60R 22/415** (2013.01 - CN KR);  
**B60R 2022/3402** (2013.01 - CN EP KR US); **B60R 2022/401** (2013.01 - CN EP KR US); **B60Y 2304/05** (2013.01 - KR);  
**B60Y 2304/07** (2013.01 - KR); **B60Y 2400/30** (2013.01 - KR)

Citation (search report)  
• [A] US 8469302 B2 20130625 - LEE HYUNG CHAN [KR], et al  
• [A] US 7635103 B2 20091222 - KIM JONG-KAK [KR], et al  
• See also references of WO 2021040420A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 4023505 A1 20220706**; **EP 4023505 A4 20230927**; CN 114667243 A 20220624; CN 114667243 B 20230707; JP 2022545550 A 20221027;  
JP 7301219 B2 20230630; KR 102225406 B1 20210309; KR 102225406 B9 20210714; US 2022289135 A1 20220915;  
WO 2021040420 A1 20210304

DOCDB simple family (application)  
**EP 20857353 A 20200827**; CN 202080061219 A 20200827; JP 2022513420 A 20200827; KR 20190105224 A 20190827;  
KR 2020011449 W 20200827; US 202017753230 A 20200827